AMENDMENTS TO THE CLAIMS

A complete listing of claims as amended herein follows. Support for the changes to claim 1 is discussed in the Remarks. Changes to claim 8 are made to adjust antecedent basis to be consistent with changes made to claim 1; introduction of the terms *first (second) output terminal* are to add clarity, but are implied by step (d). Changes to claims 11, 14 and 18 are all made to adjust antecedent basis to the change to claim 1 whereby claim 1 covers the embodiments where the Faraday cage effect is achieved with a single electrode or other conductor. The change to claim 25 is supported by the second sentence of paragraph 35. New claim 26 is supported by the single wire polygon near electrode **51** of Fig. 5, and the second sentence of paragraph 24.

AMENDMENTS TO THE CLAIMS

1. *(currently amended)* A method for reducing noise from near-surface conversions of electromagnetic to seismic energy ~~survey design including configuring, and selecting the number of, a plurality of near-surface electrodes connected to the outputs of a source signal generator for transmission of electrical current into the earth~~ in an electroseismic survey of a subsurface formation, said survey using a plurality of near-surface electrodes connected to the output terminals of a source signal generator for transmission of electrical current into the earth ~~so as to cause current to penetrate to the depth of interest and produce a seismic response at deployed receivers while providing for substantially reduced noise from near-surface conversions of electromagnetic to seismic energy~~, said method comprising ~~selecting a technique from the following group:~~

~~(a)~~ ~~designing a shallow survey to generate only near-surface electroseismic response of the deep survey, thereby generating a surface noise correction for subtracting, after amplitude normalization, from the seismic response of the deep survey;~~

~~(b)~~ positioning at least one item of conducting material electrically connected to each other ~~two electrodes of the same polarity~~ to substantially minimize near-surface electric fields in a region between or defined by the at least one item of conducting material ~~the vicinity of these electrodes~~, thereby providing an area of low surface noise for survey receiver placement.;

~~(c)~~ ~~designing the source transmission and electrode configuration such that the near-surface noise can be distinguished from the deep response in subsequent data processing based on source signature differences;~~

~~(d)~~ ~~using an applied magnetic field to modulate the near-surface noise so that it can be distinguished from the deep response in subsequent data processing;~~

~~(e) positioning one or more electrically conducting components, said components being unconnected to the signal generator, so as to shield a near-surface region from electric fields generated by the electrodes.~~

2-7. *(withdrawn)*

8. *(currently amended)* The method of claim 1, wherein the at least one item of conducting material comprise one or more near electrodes connected to a first output terminal of the source signal generator~~the technique of minimizing near-surface electric fields by electrode positioning is selected~~, and further comprising:

(a) positioning ~~a plurality of~~the one or more electrically-connected near electrodes on or near the surface above the formation;

(b) positioning at least one far electrode each connected to a second output terminal and separated from all the near electrodes by a distance sufficient to cause current to penetrate a depth of interest in the subsurface formation~~, said far electrodes being electrically connected to each other~~;

(c) placing one or more seismic receivers in locations central to the near electrodes;

(d) applying an electrical signal between the near electrodes and the far electrodes; and

(e) measuring the seismic response with the one or more receivers.

9. *(original)* The method of claim 8, wherein there are two near electrodes and two far electrodes placed on opposite sides of the near electrodes, and all electrodes are substantially horizontal and parallel.

10. *(original)* The method of claim 8, wherein there are at least four near electrodes oriented substantially vertically in two substantially parallel rows, and two substantially horizontal far electrodes placed on opposite sides of the two rows of near electrodes and substantially parallel to said two rows, said vertical electrodes defining a rectangular surface area of dimensions less than or substantially equal to the vertical electrodes' depth of penetration into the subsurface.

11. *(currently amended)* The method of claim 8, wherein the one or more near electrodes define a closed curve or polygon, and there is a single far electrode oriented substantially horizontally.

12. *(original)* The method of claim 11, wherein the near electrodes are oriented substantially horizontally.

13. *(original)* The method of claim 11, wherein the near electrodes are oriented substantially vertically.

14. *(currently amended)* The method of claim 8, wherein there are at least two near electrodes and the near electrode spacing is small compared to the subsurface formation's depth of interest and the distance between the at least one far electrode and the near electrodes is approximately equal to said depth of interest.

15. *(original)* The method of claim 8, wherein there are two near electrodes and two far electrodes, said far electrodes being spaced apart substantially the same distance as the near electrodes are spaced apart.

16. *(original)* The method of claim 15, wherein all electrodes are substantially horizontal and parallel, and wherein one near electrode and one far electrode are substantially co-linear, and the other near electrode and far electrode are substantially co-linear.

17. *(original)* The method of claim 8, wherein there are at least four near electrodes and four far electrodes and all electrodes are substantially vertical and penetrating the surface above the subsurface formation and lie substantially symmetrically in two substantially parallel planes with substantially the same number of near electrodes and far electrodes in each plane and substantially the same total number of near and far electrodes.

18. *(currently amended)* The method of claim 8, wherein there are at least two near electrodes, and further comprising adjusting the voltages on the near electrodes to further reduce electric fields in the vicinity of the near electrodes, maintaining all near electrodes at a polarity opposite to the far electrodes.

19-24. *(withdrawn)*

25. *(currently amended)* The method of claim 1 wherein the at least one item of conducting material are not connected to any terminal of the source signal generator~~technique of minimizing near-surface electric fields by shielding is selected~~, and wherein the one or more electrically conducting components are selected from the following group: (a) wire; (b) wire mesh; (c) metal foil; (d) well; (e) sheet metal; (f) metal rod.

26. *(new)* The method of claim 8, wherein the number of near electrodes is one, and its shape defines a closed curve or polygon.